

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method for selecting a transmission channel from several transmission channels of a receiver of orthogonal frequency division multiplexing radio signals with antenna diversity, with a view to favouring the transmission channel delivering a signal with the lowest binary error rate, ~~wherein~~ the method ~~comprises~~ comprising: estimating the binary error rate for each transmission channel by feeding a neural network with data representative of ~~the~~ a frequency response of the transmission channel and selecting an antenna based ~~n~~ on the output of the neural network.
2. (currently amended) The method according to Claim 1, in which the data representative of ~~the~~ a frequency response of the transmission channel are diverted in the receiver at the output of a module for calculating ~~the~~ a fast fourier transform.
3. (currently amended) The method according to Claim 1, in which the neural network has undergone learning to evaluate, on the basis of the data representative of ~~the~~ a response of the transmission channel, ~~the~~ a power level of the signal on the transmission channel which would be necessary to obtain a predetermined binary error rate and in which the output of the neural network is processed with data representative of ~~the~~ an actual power level of the signal on the transmission channel so as to evaluate ~~the~~ a binary error rate for the transmission channel.
4. (original) The method according Claim 1, in which the model of the neural network is a multilayer perceptron.

5. (currently amended) A receiver of orthogonal frequency division multiplexing signals with antenna diversity for implementing a method for selecting a transmission channel, comprising:

- a plurality of antennas;
- an orthogonal frequency division multiplexing signal processing chain coupled to the plurality of antennas; and
- a switch shifted so as to connect the input of the a signal processing chain to the antenna which provides a signal exhibiting the lowest binary error rate, the shifting of the switch being controlled on the basis of an information produced at the output of a neural network connected to estimating means providing data representative of the frequency response of the transmission channel.